

5 WHAT IS CLAIMED IS:

1. Thermoplastic resin particles containing a coating composition, said coating composition comprising components selected from the group consisting of 1) a liquid part and 2) a solid part; said liquid part comprising:

a) greater than 0.01% by weight based on the weight of the particles, of polyethylene glycol having an average molecular weight ranging from about 200 to about 800; and

15 said solid part comprising components selected from the group consisting of:

b) greater than 0.01% by weight based on the weight of the particles, of polyolefin wax;

20 c) greater than 0.01% by weight, based on the weight of the particles, of a metal salt of higher fatty acids;

d) greater than 0.01% by weight, based on the weight of the particles, of polyethylene glycol having an average molecular weight ranging from about 900 to about 10,000; and

25 e) greater than 0.01% by weight, based on the weight of the particles, of a fatty bisamide; and combinations thereof.

2. Thermoplastic resin particles of claim 1 wherein the amount of a) is 0.01% to about 0.80% by weight based on the weight of the particles; the amount of b) is 0.01% to about 1.0% by weight, based on the weight of the particles; the amount of c) is 0.01% to about 0.60% by weight, based on the weight of the particles; the amount of d) is 0.1% to about 0.80% by weight, based on the weight of the particles; and

- 5 the amount of e) is 0.1% to about 1.0% by weight,
based on the weight of the particles.
3. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a) and
b) .
- 10 4. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a) and
c) .
5. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a) and
15 d) .
6. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a) and
e) .
7. Thermoplastic resin particles of claim 1
20 wherein said coating composition consists of a), b),
and c) .
8. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a), c),
and d) .
- 25 9. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a), b),
and d) .
10. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a), b),
30 and e) .
11. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a), c),
and e) .
12. Thermoplastic resin particles of claim 1
35 wherein said coating composition consists of a), d)
and e) .

- 5 13. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a), b),
c), and d).
14. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a), b),
10 c), and e).
15. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a), c),
d), and e).
16. Thermoplastic resin particles of claim 1
15 wherein said coating composition consists of a), b),
d), and e).
17. Thermoplastic resin particles of claim 1
wherein said coating composition consists of a), b),
c), d), and e).
- 20 18. Thermoplastic resin particles of claim 3
wherein said coating composition comprises: a)
polyethylene glycol in an amount of 0.30% by weight
based on the weight of the particles; b) polyolefin
wax in an amount of about 0.40% by weight, based on
25 the weight of the particles; and c) a metal salt of
higher fatty acids in an amount of about 0.105% by
weight, based on the weight of the particles.
19. Thermoplastic resin particles of claim 1
wherein said metal salt of higher fatty acids is
30 selected from the group consisting of zinc,
magnesium, calcium, and aluminum salt of stearic,
lauric and myristic acid.
20. Thermoplastic resin particles of claim 19
wherein said metal salt of higher fatty acids is
35 selected from the group consisting of calcium
stearate and zinc stearate.

- 5 21. Thermoplastic resin particles of claim 20
 wherein said metal salt of higher fatty acids is
 zinc stearate.
22. Thermoplastic resin plastics of claim 1
 wherein said thermoplastic particles are
10 homopolymers derived from vinyl aromatic monomers
 selected from the group consisting of styrene,
 isopropylstyrene, alpha-methylstyrene, nuclear
 methylstyrenes, chlorostyrene, and tert-
 butylstyrene.
- 15 23. Thermoplastic resin particles of claim 1
 wherein said thermoplastic resin particles are
 expandable polystyrene particles.
24. Thermoplastic resin particles of claim 1
 wherein said fatty bisamide is ethylene bis-
20 stearamide.
25. Thermoplastic resin particles of claim 1
 wherein said polyethylene glycol of a) ranges in an
 amount from about 0.05% by weight to about 0.80% by
 weight, based on the weight of the particles and has
25 an average molecular weight of 400.
26. Thermoplastic resin particles of claim 1
 wherein said components of said solid part of said
 coating components are dry mixed together and then
 dry blended with said thermoplastic particles.
- 30 27. Thermoplastic resin particles of claim 1
 wherein said polyolefin wax is selected from the
 group consisting of polyethylene wax and
 polypropylene wax.
28. Thermoplastic resin particles of claim 27
35 wherein said polyolefin wax is polyethylene wax.

5 29. Thermoplastic resin particles of claim 1
 wherein said coating composition covers said
 thermoplastic resin particles in an amount ranging
 from about 0.005% to about 2.0% by weight, based on
 the weight of the thermoplastic resin particles.

10 30. A foam container made from the thermoplastic
 resin particles of claim 1.

 31. A molded article made from the thermoplastic
 resin particles of claim 1.

 32. A coating composition, comprising components
15 selected from the group consisting of 1) a liquid
 part and 2) a solid part;
 said liquid part comprising:
 a) greater than 0.01% by weight based on the
 weight of the particles, of polyethylene glycol
20 having an average molecular weight ranging from
 about 200 to about 800;
 said solid part comprising components selected
 from the group consisting of:
 b) greater than 0.01% by weight, based on the
25 weight of the particles, of polyolefin wax;
 c) greater than 0.01% by weight, based on the
 weight of the particles, of a metal salt of higher
 fatty acids;
 d) greater than 0.01% by weight, based on the
30 weight of the particles, of polyethylene glycol
 having an average molecular weight ranging from
 about 900 to about 10,000; and
 e) greater than 0.1% by weight, based on the
 weight of the particles, of ethylene bis-stearamide;
35 and combinations thereof.

5 33. The coating composition of claim 32 wherein
the amount of a) is 0.01% to about 0.80% by weight
based on the weight of the particles; the amount of
b) is 0.01% to about 1.0% by weight, based on the
weight of the particles; the amount of c) is 0.01%
10 to about 0.60% by weight, based on the weight of the
particles; the amount of d) is 0.1% to about 0.80%
by weight, based on the weight of the particles; and
the amount of e) is 0.1% to 1.0% by weight, based on
the weight of the particles.

15 34. A coating composition of claim 32 wherein said
coating composition consists of a) and c).

35. A coating composition of claim 32 wherein said
coating composition consists of a), c), and d).

36. A coating composition of claim 32 wherein said
20 coating composition consists of a), b), and c).

37. A coating composition of claim 32 wherein said
coating composition consists of b) and c).

38. A coating composition of claim 32 wherein said
coating composition consists of a), c), and e).

25 39. A coating composition of claim 32 wherein said
coating composition comprises: a) in an amount of
0.30% by weight based on the weight of the
particles; b) in an amount of about 0.40% by weight,
based on the weight of the particles; and c) in an
30 amount of about 0.105% by weight, based on the
weight of the particles.

40. A coating composition of claim 32 wherein said
metal salt of higher fatty acids is selected from
the group consisting of zinc, magnesium, calcium and
35 aluminum salt of stearic, lauric and myristic acid.

5 41. A coating composition of claim 40 wherein said metal salt of higher fatty acids is selected from the group consisting of calcium stearate and zinc stearate.

10 42. A coating composition of claim 41 wherein said metal salt of higher fatty acids is zinc stearate.

15 43. A coating composition of claim 32 wherein said polyethylene glycol of a) of said coating composition ranges in an amount from about 0.050% by weight to about 0.80% by weight, based on the weight of the particles and has an average molecular weight of 400.

20 44. A coating composition of claim 32 wherein said polyolefin wax is selected from the group consisting of polyethylene wax and polypropylene wax.

25 45. A coating composition of claim 44 wherein said polyolefin wax is polyethylene wax.

30 46. A method for improving the resistance to leakage of a foam container made with expandable thermoplastic resin particles, the steps comprising:

35 applying a coating composition of claim 32 to expandable thermoplastic resin particles, and including the step of applying component a) of said coating composition to said expandable thermoplastic resin particles and adding a combination of components b) through e) to said thermoplastic resin particles.

40 47. A method for improving the resistance to leakage of a foam container made with expandable thermoplastic resin particles, which are formed into pre-expanded thermoplastic resin particles, the steps comprising:

5 applying a coating composition of claim 32 to
said pre-expanded thermoplastic resin particles, and
including the step of optionally applying component
a) of said coating composition to said pre-expanded
thermoplastic resin particles and adding a
10 combination of components b) through e) to said pre-
expanded thermoplastic resin particles.